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10/679,197	10/02/2003	Robert Wesley Bossemeyer JR.	8285/645	9674

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EXAMINER
TSEGAYE, SABA

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Sr

Office Action Summary	Application No.	Applicant(s)
	10/679,197	BOSSEMEYER ET AL.
	Examiner	**Art Unit**
	Saba Tsegaye	2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed on 10/19/05. Claims 12-42 are pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 103

2. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. in view of Whittaker et al.

Liu discloses, in Fig. 2, a wide area communications network, comprising:

a CPE/ISP 230 (claimed a first subscriber location and a first network interface device attached to the first subscriber location); a DSL 225 (claimed a first DSL in communication with the first subscriber location via the first network interface device); ITE DSLAM 240 (claimed a first DSLAM connected to the first DSL); a CPE/ISP 231 (claimed a second subscriber location and a second network interface device); a DSL 225' (claimed a second DSL in communication with the second subscriber location via the second network interface device); and an ITE DSLAM 240' (claimed a second digital subscriber line access multiplexer connected to the second DSL).

Further, Liu discloses that users can decide the rate and ask for connection via either the current digital PSTN packet-based WAN interconnection, or virtual permanent DCS connection.

However, Liu does not expressly disclose the first and second subscriber location in communication via at least **one derived digital telephone voice channel** carried over an Internet connection and by the first and second digital subscriber lines.

Whittaker teaches, in Figs. 1-3, that home-based LAN 10 operating in conjunction with the ADSL standard comprises an Access Loop 12 connecting a POTS splitter 11 to a data network 88 (**claimed an Internet connection**). The POTS splitter is connected to the ATU-R 24. The ATU-R is connected to a LAN backbone 26 (which comprises computers 32a-c, and a packet-based telephone 31 (**IP telephone**)).

It would have been obvious to one ordinary skill in the art at the time of the invention was made to use Internet for voice communication, as taught by Whittaker, in the packet-based WAN of Liu in order to lower the overall cost of transmissions. One of ordinary skill in the art would have been motivated to do this because it provides a flexible and efficient access and setup process for permitting DSL users to configure and control an end-to-end connection path via either the digital PSTN or WAN.

3. Claims 12-19 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 6,349,096) in view of Whittaker et al. (US 6,130,893) and Weinman, Jr. (US 6,453,022).

Regarding claim 12, Liu discloses, in Fig. 2, a wide area communications network, comprising:

a CPE/ISP 230 (claimed a first subscriber location and a first network interface device attached to the first subscriber location); a DSL 225 (claimed a first DSL in communication with the first subscriber location via the first network interface device); ITE DSLAM 240 (claimed a first DSLAM connected to the first DSL); a CPE/ISP 231 (claimed a second subscriber location and a second network interface device); a DSL 225' (claimed a second DSL in communication with the second subscriber location via the second network interface device); an ITE DSLAM 240' (claimed a second digital subscriber line access multiplexer connected to the second DSL). As shown in Fig. 2, the first (CPE 230) and second (CPE 231) subscriber locations in communication via the first (225) and second (225') digital subscriber lines and by a public switched telephone network (digital PSTN) connecting the first digital subscriber line access multiplexer (240) to the second digital subscriber line access multiplexer (240). Further, in Fig. 2, the first CPE 230 is connected to **WAN, Modem, Factional T1/E1**.

However, Liu does not expressly disclose the first and second subscriber locations in communication via **at least one derived digital telephone voice channel** and wherein a subscriber unit at the first subscriber location is configured **to select one of a plurality of derived digital voice channels** for a voice communication to the second subscriber location.

Whittaker teaches, in Figs. 1-3, that home-based LAN 10 operating in conjunction with the ADSL standard comprises an Access Loop 12 connecting a POTS splitter 11 to a network 16. The POTS splitter is connected to the ATU-R 24. The ATU-R is connected to a LAN backbone 26 (which comprises computers 32a-c, terminal adapter 20a-b (which are connected to POTS line 25 and analog telephones 30a-b) and a packet-based telephone 31 ((IP telephone) converting analog voice to digital packet stream for transmission over LAN backbone 26) voice is transmitted over a packetized data path (LAN backbone 26))). The terminal adapter connects an analog telephone handset to **a digital transmission medium** (packet data line), which is adapted to create a new telephone line on demand (using LAN backbone 26, the user can place a voice call using a telephone line derived from the digital line). Further, Fig. 2 shows that data packets from a digital telephone appliance 84 to a particular telephone appliance on the home-based LAN are switched through the PSTN to the voice over ADSL gateway 86.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Liu's system to incorporate the first and second subscriber locations in communication via at least one derived digital telephone voice channel as taught by Whittaker. One of ordinary skill in the art would have been motivated to do this because it would provide additional telephone lines to an existing premise using a digital transmission medium with out the installation of new cabling (column 1, lines 55-66).

Liu discloses end users CPE (home based LAN). Whittaker discloses home based LAN (with telephones 30a-b (connected to terminal Adapters 20a-b) and a packet-based telephone 31 (IP telephone)). However, Liu in view of Whittaker does not expressly disclose the subscriber unit is configured to select one of a plurality of derived digital voice channels.

Weinman teaches that the user may select a particular telephone line from which to place a call or a particular line to answer an incoming call (column 7, lines 10-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add multi line telephone system disclosed by Weinman, to the home based LAN of Liu in view of Whittaker. One of ordinary skill in the art would have been motivated to do this because multi line telephone system would provide multiple party calling and more particularly to a multi-line calling telephone system capable of selectively controlling the interconnectivity and audio characteristics of each individual active telephone line (column 1, lines 10-15).

Regarding claim 13, Liu discloses the system further including a first ISP (230) connected to an ATM network (260) and a second ISP connected (231) to the ATM network (260), wherein the ATM network (260) is in communication with both the first digital subscriber line access multiplexer (240) and the second digital subscriber line access multiplexer (240).

Regarding claims 14-16 and 21-27, Liu discloses all the claim limitations as stated above. Liu discloses end users CPE. Further, Liu suggests that the invention provides a smooth migration for all current modem, ISDN, and LAN users (column 5, lines 56-57).

However, Liu does not specifically disclose the following: a) subscriber location includes a local area network (as in claims 14 and 16); and b) the local area network includes a first telephone system; a facsimile machine and connects to the subscriber unit, which is capable of receiving and sending a digitized facsimile transmission (as in claims 15, and 21-27).

Regarding claims 14 and 16, Whittaker teaches a home base LAN 10 operating in conjunction with the ADSL standard comprises an Access Loop 12 connecting a POTS splitter 11 to a network 16 (see fig. 1)

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add a local area network, such as that suggested by Whittaker, in the CPE of Liu in order to have a system that links together different office equipment and forms a network within an office or a building.

Regarding claims 15 and 21-27, Whittaker teaches that the LAN backbone 26 is connected to computers, packet-based telephones and telephone appliances (connected to terminal Adapters 20a-b for converting an analog telephone signal into a digital telephone signal). (see fig. 1).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to add a facsimile machine and connects to the subscriber unit, such as that suggested by Whittaker, in the CPE of Liu in order to meet specific needs.

Regarding claims 17-19, Liu discloses, in Fig. 3, a PCM bank 242 that convert analog telephone signal into a digital telephone; and a DSL Bank/Dialing Logic circuit 243 that converts DSL signals to digital data signals that can be routed to the various data paths. This circuit provides the necessary processing during call setup and tear down (dialing up the destinations current modem use via either the PSTN or WAN, or setting up a virtual circuit via the WAN).

However, Liu does not discloses wherein the first local area network includes a telephone attached to the subscriber unit, the subscriber unit converting an analog telephone signal into a digital telephone signal.

Whittaker discloses home based LAN (with telephones 30a-b (connected to terminal Adapters 20a-b for converting an analog telephone signal into a digital telephone signal).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add converter for converting an analog telephone signal into a digital telephone signal, such as that suggested by Whittaker, to the subscriber unit of Liu. One of ordinary skill in the art would have been motivated to do this because it would provide additional telephone lines to an existing premise using a digital transmission medium with out the installation of new cabling (column 1, lines 55-66).

4. Claims 28-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. in view of Whittaker and Klok et al. (5,930,250).

Regarding claims 28-36 and 39-41, Liu discloses, in Figs. 2 and 3, a wide area communications network, comprising: a CPE/ISP 230 (claimed a first subscriber location and a first network interface device attached to the first subscriber location); a DSL 225 (claimed a first DSL in communication with the first subscriber location via the first network interface device); ITE DSLAM 240 (claimed a first DSLAM connected to the first DSL, and separating a first DSL channel from a first telephony channel); digital PSTN (claimed a PSTN connected to the first telephony channel); a WAN 260 (claimed an ATM network connected to the first DSL channel) ITE DSLAM 240 (claimed a second DSLAM connected to the ATM network by a second DSL channel and connected to the PSTN by a second telephony channel); a DSL 225' (claimed a second DSL connected to the second DSLAM); a CPE/ISP 231 (claimed a second subscriber location having a second network interface device connected to the second DSL).

However, Liu does not specifically disclose a first hybrid circuit communicating a voice telephone call from a first telephone in communication with a second telephone in the second telephone system, wherein a first hybrid circuit has a first portion comprising a virtual circuit and a second portion comprising a switched circuit.

Whittaker teaches, in Figs. 1-3, that home-based LAN 10 operating in conjunction with the ADSL standard comprises an Access Loop 12 connecting a POTS splitter 11 to a network 16.

The POTS splitter is connected to the ATU-R 24. The ATU-R is connected to a LAN backbone 26 (which comprises computers 32a-c, terminal adapter 20a-b (which are connected to POTS line 25 and analog telephones 30a-b) and a packet-based telephone 31 ((IP telephone) voice is transmitted over a packetized data path (LAN backbone 26))). The terminal adapter connects an analog telephone handset to **a digital transmission medium** (packet data line), which is adapted to create a new telephone line on demand.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Liu's system to incorporate a first hybrid circuit is configured to communicate a voice telephone call over both a virtual circuit and switched circuit as taught by Whittaker. One of ordinary skill in the art would have been motivated to do this because it would provide a lifeline for the telephone appliance on a power-off condition and it would enable the user to add additional lines without additional wiring into premise. (See abstract and column 1, lines 55-66; column 4, lines 39-42).

Further, Liu does not specifically disclose that the subscriber location includes a local area network (as in claims 28, 33, 34, 40 and 41).

Whittaker teaches a home base LAN 10 operating in conjunction with the ADSL standard comprises an Access Loop 12 connecting a POTS splitter 11 to a network 16 (see fig. 1)

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add a local area network, such as that suggested by Whittaker, in the CPE of Liu in order to have a system that links together different office equipment and forms a network within an office or a building.

Further, Liu in view of Whittaker does not expressly disclose an IWU that is connected to the first DSLAM and to the public switched telephone network (as in claims 20, 28, 35, 36 and 39). However, IWU is a well-known device for bridging or interfacing one communication format with another.

Klok disclose, in Fig. 1, a device 108 for receiving and routing data packets from a non-packet switching network PSTN.

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add an IWU, such as that suggested by Klok, in the communication system of Liu in view of Whittaker in order to mediate communication between different protocols within different system and to provide conversion between a packet data format and a circuit switch data format.

Regarding claims 37 and 38, Liu discloses all the claim limitations as stated above, except for the local area network includes a facsimile machine and connects to the subscriber unit, which is capable of receiving and sending a digitized facsimile transmission.

Whittaker teaches that the LAN backbone 26 is connected to computers, packet-based telephones and telephone appliances (which is connected to terminal Adapters 20a-b for converting an analog telephone signal into a digital telephone signal) (see fig. 1).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to add a facsimile machine and connects to the subscriber unit, such as that suggested by Whittaker, in the CPE of Liu in order to meet specific needs

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. in view of Whittaker et al and Weinman, Jr. as applied to claim 12 above, and further in view of Klok et al.

Liu in view of Whittaker and Weinman discloses all the claim limitations as stated above, except for the telephone virtual circuit terminates at an interworking unit. However, IWU is a well-known device for bridging or interfacing one communication format with another.

Klok disclose, in Fig. 1, a device 108 for receiving and routing data packets from a non-packet switching network PSTN.

It would have been obvious to one ordinary skill in the art at the time of the invention was made to add an IWU, such as that suggested by Klok, in the communication system of Liu in view of Whittaker and Weinman in order to mediate communication between different protocols within different system and to provide conversion between a packet data format and a circuit switch data format.

Response to Arguments

6. Applicant's arguments filed 10/19/05 have been fully considered but they are not persuasive. Applicant argues that (Remarks, page 9) “a plurality of derived digital voice channels for a voice communication to the second subscriber location is entirely missing from the combination proposed by the Examiner”. Examiner respectfully disagrees. Liu discloses a digital subscriber loop access and end-to-end data and analog voice connection system. As shown in fig. 2, subscriber locations include digital subscriber line interface units 230-233 connected to a digital subscriber line 225 respectively. Furthermore, the end-users can be modem, **ISDN,** and

LAN users. As known, ISDN is a digital telephone line that carries both data and voice traffic. Whittaker teaches that a digital data network 26 is connected with a packet based telephone 31, computer 32a-c and adapters 20a-b that are connected with analog telephones 30a-b. Using ***a digital data network 26*** the subscribers 30ab, 31 and 32a-c can place voice call using a telephone line derived from the digital line. In addition, the packet based telephone 31, which may be an IP based telephone is connected to the LAN 26. This means that the subscriber 31 can be identified based on a particular IP address.

7. Applicant further, argues (page 10) that Weinman fails to teach or suggest a derived digital telephone voice channel or accessing a derived digital telephone voice channel. It is respectfully submitted that the rejection is based on the combined teaching of Liu in view of Whittaker and Weinman, and that Liu in view of Whittaker, as pointed out above does teach this feature.

8. Applicant, further, argues (Remarks, pages 10-11) that there is no motivation to combine the Liu, Whittaker and Weinman references. Examiner respectfully disagrees. As discussed above and as shown in fig. 2, Liu discloses subscriber locations include digital subscriber line interface units 230-233 connected to a digital subscriber line 225 respectively. Furthermore, the end-users can be modem, **ISDN, Factional T1/E1,** and **LAN** users. The Factional T1/E1 is connected to DSL, and the DSL connected to DSLM, and DSLM connected to the digital PSTN or WAN. Whittaker teaches end-users such as the packet based **digital telephone** and computer terminals are connected to LAN backbone 26, LAN 26 is connected with **ADSL**. Weinman teaches a user may select a particular telephone line from which to place or a particular line to answer an incoming call. It is respectfully submitted that Whittaker's home base LAN and

Weinman's method of line selection can substitute Liu's subscriber location where a subscriber unit can select from among different derived digital telephone voice channels.

9. Regarding claim 42, Applicant argues (Remarks, page 13) that " Applicant agrees with the Examiner that Liu lacking at least a teaching of **an Internet connection carrying voice information**. Applicant disagrees, however, that Whittaker makes up for deficiencies in Liu...". Examiner respectfully disagrees with Applicant contention. Liu discloses, as shown in fig. 2, subscriber locations include digital subscriber line interface units 230-233 connected to a digital subscriber line 225 respectively. Furthermore, the end-users can be modem, **ISDN, Factional T1/E1,** and **LAN** users. The Factional T1/E1 is connected to DSL, and the DSL connected to DSLM, and DSLM connected to the digital PSTN or WAN. WAN refers to **any packet-switching based network** (see column 2, lines 16-18). As known, Internet is a packet-switching based network. Whittaker teaches end-users such as the packet based **digital telephone** and computer terminals are connected to LAN backbone 26, LAN 26 is connected with **ADSL**. In addition, the packet based telephone 31, which may be **an IP based telephone** is connected to LAN 26. This means that subscriber 31 can be identified based on particular IP address and an Internet connection carrying voice information. Therefore, Liu's subscriber location can be substituted by Whittaker's home base LAN in order to provide communication between the first and second subscriber locations via a derived digital telephone voice channel carried over and Internet connection and by the first and second digital subscriber lines.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
January 8, 2006

JOHN PEZZLO
PRIMARY EXAMINER